REMARKS

I. Summary of Office Action

Claims 1-50 are pending in the application.

The Examiner rejected claims 1-8, 12-23, and 28-50 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,088,032 to Bosack (hereinafter, "Bosack").

The Examiner rejected claims 9-11 under 35 U.S.C. § 103(a) as being unpatentable over Bosack in view of U.S. Patent No. 5,191,626 to Stern (hereinafter, "Stern").

Claim 24 was rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over Bosack.

The Examiner rejected claims 25-27 under 35 U.S.C. § 103(a) as being unpatentable over Bosack in view of U.S. Patent No. 6,526,056 to Rekhter et al. (hereinafter, "Rekhter").

II. Summary of Applicants' Reply

Amendments to the specification and the drawings have been proposed by applicants in order to correct certain typographical errors. No new matter would be added by these amendments to the specification and drawings.

Applicants have amended claims 1, 28, 39, and 44 in order to correct typographical errors in some of these claims and to more particularly define the present invention. No new matter has been added by these amendments to the claims.

The Examiner's rejections under 35 U.S.C. §§ 102(b) and 103(a) are respectfully traversed by applicants.

Reconsideration of this application is respectfully requested.

III. The Amendments to the Specification

Applicants propose amending the specification to correct certain typographical errors as set forth in the following table. These proposed amendments are fully supported and justified by the original specification and drawings. Applicants respectfully request that the Examiner enter these proposed amendments to the specification.

Page(s), paragraphs	Change From	Change To	Justification
Page 1, paragraph 0002	09/___,___; 09/___,___; 09/___,___; and 09/___,___	09/775,347; 09/775,350; 09/775,346; and 09/775,349	Clerical/ Typographical
Pages 11-12, paragraph 0021	different local root Node that Nodes A and B	different local root Node than Nodes A and B	Typographical
Page 16, paragraph 0030	FIG. 1 shows an example of a typical prior end network	FIG. 1 shows an example of a typical prior art network	Typographical
Page 16, paragraph 0030	FIG. 2 shows an example of a typical prior end network	FIG. 2 shows an example of a typical prior art network	Typographical
Page 17, paragraph 0034	a conventional computer station	a conventional computer station 30	Typographical
Pages 17-18, paragraph 0035	(*EAG*))	(*EAG*)	Typographical
Pages 17-18, paragraph 0035	i.e. an imaginary node	i.e., an imaginary node	Typographical
Pages 17-18, paragraph 0035	(i.e. it's coordinate label)	(i.e., it's coordinate label)	Typographical
Pages 17-18, paragraph 0035	being routed according to from a Node	being routed from a Node	Typographical
Pages 20-21, paragraph 0040	Node, X	Node, X,	Typographical
Page 22, paragraph 0045	if Figure 3	in Figure 3	Typographical
Page 39, paragraph 0080	having end Nodes N1 and N2	having end Nodes E1 and E2	Typographical
Pages 39-40, paragraph 0081	A though H	A through H	Typographical
Pages 39-40, paragraph 0081	Nods	Nodes	Typographical
Pages 39-40, paragraph 0081	network) It may	network), it may	Typographical
Pages 39-40, paragraph 0081	links S1, and S2	links S1 and S2	Typographical
Pages 39-40, paragraph 0081	network) it can	network), it can	Typographical

IV. The Amendments to the Drawings

Applicants propose amending FIGS. 3 and 5 to correct typographical errors in each. More particularly, in FIG. 3, applicants propose changing "21, 231, 3131, 412131" located to the left of node "G" to "12, 231, 3131, 412131." This change is supported by FIG. 3 as originally filed, as well as by the table provided in page 21, paragraph 42 of the specification. Applicants

also propose amending FIG. 5 by changing "2 3" to "2.3" and by adding a box labeled "V" as shown. These proposed changes are to correct typographical errors, and are supported by FIG. 5 as originally filed, as well as by page 25, paragraph 51 of the specification.

In accordance with 37 C.F.R. § 1.121, replacement sheets of the drawings containing FIGS. 3 and 5, as well as the other figures, are enclosed herewith.

Applicants respectfully request that the Examiner enter these amendments to the drawings.

V. The Amendments to the Claims

Applicants have amended claims 1, 28, 39, and 44 as indicated in the Listing of Claims that begins on page 7 of this paper. These amendments have been made in order to correct typographical errors in some of these claims and to more particularly define the present invention.

The amendments to claims are fully supported and justified by the specification and drawings as originally filed. No new matter has been added.

VI. The Rejection of Independent Claims 1, 33, and 44 Under 35 U.S.C. § 102(b)

Each of the pending independent claims 1, 33, and 44 was rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by Bosack. The Examiner's rejection of independent claims 1, 33, and 44 is respectfully traversed.

Applicants respectfully submit that each of independent claims 1, 33, and 44 are allowable for at least the reasons set forth below.

A. Independent Claim 1 Is Allowable Over Bosack

Generally speaking, the invention defined by independent claim 1 relates to a circuit based network that includes a plurality of Nodes interconnected by Links. As amended, independent claim 1 requires that a network according to the invention conform to the following five requirements:

> each Node is assigned a set of one or more coordinate labels, each representing a path comprising one or more Links or other Nodes;
>
> each coordinate label is unique to the Node to which it is assigned;

a path between a first Node and a second, non-adjacent Node being determined from one of said coordinate labels assigned to said first Node and one of said coordinate labels assigned to said second Node;

said first Node is a gateway Node and said second Node is a destination Node; and

data from a foreign network is received at said gateway Node and routed on said network to said destination Node.

Bosack, on the other hand, relates to a method and apparatus for routing data transmissions among computer networks with the use of gateway circuits. As described in Bosack, e.g., at column 1, line 60 to column 2, line 38 and column 4, lines 10-42, each gateway circuit learns all the destinations that can be reached through it. This information is compiled for each gateway circuit in path definitions to each destination, as shown in Bosack's Table 1. When there is a destination whose network does not have a directly connected interface with the gateway circuit, the path definitions also include the identity of the next gateway circuit (called the "next hop") toward that destination. The path definitions, however, do not include information for the entire path between the gateway circuit and each destination. For example, referring to FIG. 2 of Bosack, when gateway circuit 108 receives a data transmission from a computer in network 98 that is destined for a computer in non-adjacent network 94, gateway circuit 108 will not know (or need to know) the entire route to reach the destination. Rather, gateway circuit 108 would simply send the data to one of gateway circuits 104, 106, and 76 (i.e., each a "next hop") in order for the data to ultimately reach the computer in network 94.

Applicants respectfully submit that Bosack fails to show or suggest all the elements of applicants' independent claim 1 as amended. For example, for at least the reasons set forth below, Bosack fails to show or suggest determining a path between a first Node and a second, non-adjacent Node using a unique coordinate label of each Node, as required by applicants claim 1.

(i) Assuming Bosack's Computers Or Networks Are Second Nodes, Bosack Does Not Show Or Suggest Assigning Unique Coordinate Labels To Second Nodes That Are Used In Determining Paths Thereto

In rejecting the claims, the Examiner asserted that FIG. 2 of Bosack shows a "gateway and destinations" which correspond to applicants' claimed first Node and second Node (Office

Action, page 2, bottom line). Because Bosack describes computers attached to networks 62-98 as being the "destinations" of data transmissions, applicants presume that either Bosack's computers or networks are the "destinations" to which the Examiner is referring. Assuming arguendo that Bosack's computers or networks are second Nodes as defined in applicants' claimed invention, these computers or networks would have to be at least assigned unique coordinate labels that are used in determining paths thereto in order to anticipate or make obvious applicants' claim 1. However, applicants respectfully submit that Bosack does not show or suggest determining paths to computers or networks using unique coordinate labels assigned to those computers or networks for at least the following reasons:

(a) Computers and Networks In Bosack Are Not Assigned Coordinate Labels

As stated above, Bosack's gateway circuits are assigned path definitions representing the paths toward destinations via adjacent gateway circuits ("next hops") (see, e.g., Table 1 in column 5 of Bosack, and the preceding text at column 4, lines 64-65). Assuming arguendo that these path definitions are coordinate labels, nowhere does Bosack show or suggest assigning these path definitions to Bosack's computers or networks. In fact, there is no reason in Bosack to assign path definitions to the computers or networks, because each gateway circuit leading up to a destination network maintains the necessary path definitions to select the "next hop" (another gateway circuit) for a data transmission path, until the final gateway circuit is reached and the data is provided by this final gateway circuit to the destination network.

Accordingly, because Bosack does not show or suggest assigning path definitions to computers or networks, even assuming such path definitions were coordinate labels, it also fails to show or suggest assigning coordinate labels to computers or networks. Thus, Bosack does not show or suggest determining paths to computers or networks using coordinate labels assigned to those computers or networks, as required by claim 1.

(b) Even If Computers And Networks Were Assigned Coordinate Labels In Bosack, They Would Not Each Be Unique

Even assuming arguendo that path definitions were assigned to both gateway circuits and computers or networks (which applicants assert they are not), Bosack would still fail to show or

suggest those path definitions being unique to only one of the gateway circuits and computers or networks because they would be assigned to both gateway circuits and computers or networks.

Accordingly, because Bosack does not show or suggest assigning unique coordinate labels to computers or networks, it also fails to show or suggest determining paths to computers or networks using unique coordinate labels assigned thereto, as required by claim 1.

(ii) Even Assuming Computers or Networks In Bosack Are Second Nodes That Are Assigned Unique Coordinate Labels In Bosack, These Unique Coordinate Labels Would Not Be Used In Determining Paths To These Computers or Networks

Even assuming arguendo that a computer or network in Bosack was a second Node that was assigned unique coordinate labels, Bosack would still fail to show or suggest determining a path to the computer or network from one of the coordinate labels assigned to that computer or network because the path to that computer or network is only determined from the gateway circuits leading up to it.

More particularly, in Bosack, when a gateway circuit receives a data transmission that is destined for a non-adjacent Node, the gateway circuit decides on the "next hop" (i.e., the next gateway circuit) for the data transmission. Once the data transmission reaches the final gateway circuit, which has a directly connected interface to the destination computer or network, the data is transmitted to that destination computer or network based on the information assigned to that gateway circuit, not based on information assigned to the destination computer or network.

Accordingly, Bosack fails to show or suggest a path between a first Node and a second, non-adjacent Node (with a computer or network being the second Node) being determined from "one of said coordinate labels assigned to said first Node and one of said coordinate labels assigned to said second Node," as required by claim 1.

(iii) Even Assuming A Gateway Circuit Is The Second Node, Bosack Does Not Show or Suggest Using A Coordinate Label Assigned To The Gateway Circuit In Determining A Path To That Gateway Circuit

Even assuming arguendo that a gateway circuit in Bosack is a second Node in a particular data transmission, Bosack would still fail to disclose determining a path to a second Node from one of the coordinate labels assigned to that Node.

As described throughout Bosack, all of the path definitions that are provided to gateway circuits are used only for outbound connections (to the "next hop" in a data transmission). Nowhere does Bosack show or suggest that gateway circuits are assigned coordinate labels representing paths to, rather than from, the gateway circuits. Thus, assuming arguendo that path definitions were coordinate labels, any such path definitions assigned to a destination gateway circuit would never be used to construct a path to that gateway circuit.

Accordingly, Bosack fails to show or suggest a path between a first Node and a second, non-adjacent Node (even if a gateway circuit was the second Node) being determined from "one of said coordinate labels assigned to said first Node and one of said coordinate labels assigned to said second Node," as required by applicants' claim 1.

For at least the foregoing reasons, applicants respectfully request that the rejection of claim 1, and claims 2-32 which depend from claim 1, be withdrawn by the Examiner.

B. Independent Claim 33 Is Allowable Over Bosack

Generally speaking, applicants' invention as defined by independent claim 33 relates to a method for determining a path from a source Node to a destination Node in a circuits based network. In particular, as defined by claim 33, the method requires performing each of the following steps (emphasis added):

> assigning to [all] second Nodes, including said source Node and said destination Node, one or more coordinate labels, each coordinate label assigned to a second Node representing a path through said network from said second Node to [a] first Node;
>
> determining a path from said source Node to said destination Node by combining one coordinate label of said source Node and one coordinate label of said destination Node; and
>
> configuring said network according to said path.

Thus, in accordance with the invention defined by applicants' claim 33, a path between two second Nodes (i.e., a source Node and a destination Node) in a circuits based network is determined using one coordinate label from each Node, where each coordinate label represents a respective path from the Node to which it is assigned to a Node (i.e., the first Node) different from the source Node and the destination Node.

Contrary to the Examiner's suggestion, applicants respectfully submit that Bosack does not show or suggest determining a path between a source Node and a destination Node as required by applicants' claim 33 for at least the following reasons:

(i) Bosack's Path Definitions Are Only Used For Outbound Connections

For at least the same reasons as set forth above in connection with claim 1, Bosack does not show or suggest combining one coordinate label from a source Node and one coordinate label from a destination Node to determine a path from between these Nodes. In particular, as explained above in part (A)(iii) of this section, the path definitions that are disclosed in Bosack are used solely for outbound connections. Thus, even assuming arguendo that a coordinate label was assigned to a destination Node (whether a gateway circuit, network, or computer), it would not be combined with any other coordinate label to determine a path to that destination Node, as required by applicants' claim 33.

Accordingly, Bosack fails to show or suggest a path between Nodes being determined "by combining one coordinate label of said source Node and one coordinate label of said destination Node," as required by claim 33.

(ii) Bosack Does Not Show or Suggest Determining A Path Between Source And Destination Nodes Using Coordinate Labels Representing Paths To A Different Node

Even assuming arguendo that a coordinate label assigned to the destination Node was combined with a coordinate label assigned to the source Node to determine a path between the two Nodes in Bosack, Bosack nevertheless fails to disclose that such coordinate labels assigned to the source and destination Nodes represent paths to a "first Node" that is different from both the source or destination Node (as required by claim 33).

For at least the foregoing reasons, applicants respectfully request that the rejection of claim 33, and claims 34-43 which depend from claim 33, be withdrawn by the Examiner.

C. Independent Claim 44 Is Allowable Over Bosack

Generally speaking, applicants' invention as defined by independent claim 44 relates to a Node for use in a circuits based network. As required by claim 44, as amended, the Node "has

one or more coordinate labels assigned thereto, each coordinate label representing a complete path from said Node to a particular other, non adjacent Node of [the] network, each of said coordinate labels being unique to said Node."

Unlike the claimed invention, nowhere in Bosack is it shown or suggested that a Node is assigned one or more coordinate labels, where each coordinate label represents a complete path from that Node to a non-adjacent Node. This is apparent from the fact that when a gateway circuit in Bosack receives a data transmission that is destined for a non-adjacent node, the gateway circuit is only able to decide on the "next hop" (i.e., the next gateway circuit) for the data transmission because that is all that the path definitions provide. Thus, Bosack does not show or suggest the claimed invention.

Accordingly, applicants respectfully request that the rejection of claim 44, and claims 45-50 which depend from claim 44, be withdrawn by the Examiner.

VII. The Rejections of Dependent Claims 2-32, 34-43, and 45-50 Under 35 U.S.C. §§ 102(b) and 103(a)

The Examiner rejected each of dependent claims 2-8, 12-23, 28-32, 34-43, and 45-50 under 35 U.S.C. § 102(b) as being anticipated by Bosack. In addition, the Examiner rejected each of dependent claims 9-11 and 24-27 under 103(a) as being unpatentable over some combination of Bosack, Rekhter, and Stern.

Applicants respectfully submit that claims 2-8, 12-23, 28-32, 34-43, and 45-50, each of which depends from one of independent claims 1, 23, and 44, are allowable for at least the same reasons that the independent claims are patentable as set forth above Therefore, applicants respectfully request that the Examiner withdraw the rejections of claims 2-8, 12-23, 28-32, 34-43, and 45-50.

VIII. Petition For Extension Of Time

Applicants have submitted herewith a petition for a three-month extension of time for responding to the Office Action mailed on November 17, 2004. The Director is hereby authorized to charge any additional fees which may be required for this response, or credit any overpayment, to Deposit Account No. 08-0219.

IX. Conclusion

Applicants respectfully submit that, as described above, the cited references do not show or suggest the combination of features recited in the claims. Applicants do not concede that the cited references show any of the elements recited in the claims. However, applicants have provided specific examples of elements in the claims that are clearly not present in the cited prior art.

Applicants strongly emphasize that one reviewing the prosecution history should not interpret any of the examples applicants have described herein in connection with distinguishing over the prior art as limiting to those specific features in isolation. Rather, applicants assert that it is the combination of elements recited in each of the claims, when each claim is interpreted as a whole, which is patentable. Applicants have emphasized certain features in the claims as clearly not present in the cited references, as discussed above. However, applicants do not concede that other features in the claims are found in the prior art. Rather, for the sake of simplicity, applicants are providing examples of why the claims described above are distinguishable over the cited prior art.

Applicants wish to clarify for the record, if necessary, that the claims have been amended to expedite prosecution. Moreover, applicants reserve the right to pursue the original subject matter recited in the present claims in a continuation application.

Any narrowing amendments made to the claims in the present Reply are not to be construed as a surrender of any subject matter between the original claims and the present claims; rather merely applicants' best attempt at providing one or more definitions of what the applicants believe to be suitable patent protection. In addition, the present claims provide the intended scope of protection that applicants are seeking for this application. Therefore, no estoppel should be presumed, and applicants' claims are intended to include a scope of protection under the Doctrine of Equivalents.

Further, applicants hereby retract any arguments and/or statements made during prosecution that are rejected by the Examiner during prosecution and/or that are unnecessary to obtain allowance, and only maintain the arguments that persuade the Examiner with respect to the allowability of the patent claims, as one of ordinary skill would understand from a review of the prosecution history. That is, applicants specifically retract statements that one of ordinary

skill would recognize from reading the file history as not necessary, not used and/or rejected by the Examiner in allowing the patent application.

For at least the reasons set forth above, applicants respectfully submit that this application, as amended, is in condition for allowance. Reconsideration and prompt allowance of the application are respectfully requested.

Respectfully submitted,

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